

In re Application of  
Rosenmund et al.  
Application No.: 09/807,499  
Filed: November 5, 2001  
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PATENT  
ATTORNEY DOCKET NO.: VOSS1160

**Amendments to the Drawings:**

The attached replacement sheets of drawings show changes to Figures 1-7. These replacement sheets replace the original sheets filed with the application. In each of sheets 1-17, the separate panels intended to form one complete view have been identified by the same number followed by a capital letter.

Attachments: Replacement Sheets 1-18.

### **REMARKS**

Claims 2, 5-35 and 37 were pending prior to this Response, with claims 18-20 and 24-33 having been withdrawn from further consideration. The Office indicated that claims 2, 6-8, 10-14 and 17 are allowable as written. (Office Action, page 5, item 11). The Office further suggested additional claims 38 and 39 that would be allowable if submitted (*Id.* At pages 5-6).

By the present communication, claims 38 and 39 have been added, claims 5, 15, 16, 34 and 35 have been canceled, and claims 10, 11, 21-23, and 37 have been amended to recite Applicants' invention with greater particularity. The amendments do not raise any issues of new matter being supported by the specification and claims as filed. Thus, upon entry of the present amendment, claims 2, 6-14, 17-33 and 37-39 will be pending in this application.

### **Objections to the Specification**

Applicants respectfully traverse the objection of the specification under 37 C.F.R. §1.77 as allegedly failing to include appropriate section headings. Applicants have amended the specification to include the appropriate section headings and to relocate the Summary of the Invention as suggested. Withdrawal of the objection is respectfully requested.

### **Objections to the Drawings**

Applicants respectfully traverse the objection to the drawings under 37 C.F.R. §1.821(d) as allegedly failing to include sequence identifiers. Applicants have amended the specification to include a Brief Description of the Drawings that includes appropriate sequence identifiers. Accordingly, withdrawal of the objection is respectfully requested.

Applicants respectfully traverse the objection to the drawings under 37 C.F.R. §1.84(u)(1) as allegedly failing to identify partial views of a drawing intended to form one complete view by the same number followed by a capital letter. Applicants have amended Figures 1-7 to insert the appropriate labels as suggested by the Examiner. Accordingly, withdrawal of the objection is respectfully requested.

**Objections to the Claims**

Applicants respectfully traverse the objection of claim 5 as allegedly being a substantial duplicate of claim 2. In order to reduce the issues and further prosecution, Applicants have canceled claim 5 without prejudice, rendering the objection moot. Withdrawal of the objection is respectfully requested.

Applicants respectfully traverse the objection of claims 21-23, 34, 35 and 37 as allegedly reciting an improper Markush Group. Applicants have canceled claims 34 and 35 without prejudice, rendering the objection moot as to those claims. Applicants submit that according to M.P.E.P. §1850, “[n]ucleotide sequences encoding the same protein are considered to satisfy the unity of invention standard and will continue to be examined together.” Since a polypeptide and the nucleic acid molecule encoding the polypeptide share a common technical feature, a vector containing the nucleic acid molecule will also share that technical feature. As such, Applicants have amended claims 21 and 37 to recite “a nucleic acid molecule of claim 2, a vector of claim 8, or a polypeptide of claim 18.” Accordingly, withdrawal of the objection is respectfully requested.

**Rejection under 35 U.S.C. § 112, First Paragraph**

Applicants respectfully traverse the rejection of claims 9, 15, 16, 22, 23, 34 and 35 under 37 C.F.R. §112, first paragraph as allegedly failing to comply with the enablement requirement. Specifically, the Office alleges that claims 9, 15 and 16 encompass a transgenic multicellular organism and a vector for the production thereof. In order to reduce the issues and further prosecution, Applicants have canceled claims 15, 16, 34 and 35, rendering the rejection moot as to those claims. Applicants submit that the pending claims no longer encompass a transgenic multicellular organism. With regard to a vector for the production thereof, the specification at page 18, lines 5-16, discloses that,

...said vector may also be, besides an expression vector, a gene transfer and/or gene targeting vector. Gene therapy, which is based on introducing therapeutic genes (for example for vaccination) into

cells by ex-vivo or in-vivo techniques is one of the most important applications of gene transfer. Suitable vectors, vector systems and methods for in-vitro or in-vivo gene therapy are described in the literature and are known to the person skilled in the art; see, e. g., Giordano, *Nature Medicine* 2 (1996), 534-539; Schaper, *Circ. Res.* 79 (1996), 911- 919; Anderson, *Science* 256 (1992), 808-813, Isner, *Lancet* 348 (1996), 370-374; Muhlhauser, *Circ. Res.* 77 (1995), 1077-1086; Wang, *Nature Medicine* 2 (1996), 714-716; WO 94/29469; WO 97/00957, Schaper, *Current Opinion in Biotechnology* 7 (1996), 635-640 or Verma, *Nature* 389 (1997), 239-242 and references cited therein.

Thus, one of skill in the art, in view of the specification, would understand the Applicants were in possession of the claimed invention vectors because use of the vectors and vector systems for *in vitro* or *in vivo* gene therapy were described in the cited literature. Accordingly, withdrawal of the rejection is respectfully requested.

The Office further alleges that claims 9, 22, 23, 34 and 35 are drawn to a method of treatment by administering a nucleic acid encoding an ionotropic receptor subunit and a vector or composition formulated specifically for this purpose. As indicated above, in order to reduce the issues and further prosecution, Applicants have canceled claims 34 and 35, rendering the rejection moot as to those claims. In addition to the above-cited passage, the specification discloses at page 18, lines 17-19 that, "[t]he nucleic acid molecules of the invention and vectors as described herein above may be designed for direct introduction or for introduction via liposomes, or viral vectors (e. g. adenoviral, retroviral) into the cell." Thus, one of skill in the art, in view of the specification, would understand the Applicants were in possession of the claimed invention vectors because use of the vectors and vector systems for *in vitro* or *in vivo* gene therapy were described in the cited literature. Accordingly, withdrawal of the rejection is respectfully requested.

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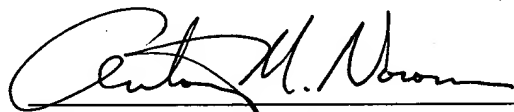
**Conclusion**

In summary, for the reasons set forth herein, Applicants submit that the claims clearly and patentably define the invention and respectfully request that the Examiner withdraw all rejections and pass the application to allowance. If the Examiner would like to discuss any of the issues raised in the Office Action, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

No fee is believed to be due in connection with filing this paper. However, the Commissioner is hereby authorized to charge any fees that may be required by this paper, or credit any overpayment to Deposit Account 07-1896 referencing the above- identified attorney docket number. A duplicate copy of the Transmittal Sheet is enclosed.

Respectfully submitted,

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